REMARKS

Claims 39, 41-44, and 53 are pending in the present application. Claims 31-38, 40, 45-52, and 54 are hereby requested cancelled without prejudice. Claims 39 and 53 are amended. Reconsideration of the claims is respectfully requested.

I.   35 U.S.C. § 103, Obviousness

The examiner has rejected claims 31-58 under 35 U.S.C. § 103 as being unpatentable over Hughes (US patent 5920261) in view of Toung "Wal-Mart Stores, Inc.--Company Report". This rejection is respectfully traversed.

Claims 31-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al. patent number 5, 920,261 in view of Toung "Wal-Mart Stores, Inc. -- Company Report".

Hughes et al teaches associating spatial relationships with customer data to determine additional information concerning purchases by the customer (see at least col. 16, line 40 -- col. 17, line 50, col. 18, lines 19-23, col. 20, lines 10-15, 25-65), recording (identifying) paths of customers (see at least col. 18, lines 15-17, 35-40, col. 15, lines 15-50), associating the locations of products with the paths of customers as claimed (see at least col. 16, line 40 -- col. 17, line 50, col. 18, lines 19-23, col. 20, lines 10-15, 25-65) which employs data mining algorithms to generate input data for forming the set of spatial relationships (see at least col. 17, lines 5-20, 30-45, col. 20, lines 10-15, 25-60) and spatial analysis algorithms to from the set of spatial relationships (see at least col. 20, lines 40-50, col. 19, lines 1-35, col. 13, lines 25-45, col. 18, lines 15-40).

Toung teaches generating customer data by associating customers with information related to each customer using data mining and associating the information with spatial relationships (p. 1). It would have been obvious to one having ordinary skill in the art at the time of the invention to have used the data mining of Toung in the system of Hughes since the data mining of Toung would have provided the ability to sort patterns by customer information.

Claim 39 is reproduced for reference.

39. (Currently Amended)   A method for determining relationships of data associated with product placement in a retail space, the method comprising the steps of:

generating data relationships using data mining techniques, wherein the data relationships associate individual customers with information related to the individual customers;

generating spatial relationships using data mining techniques, wherein the spatial relationships include relative placement of products within the retail space;

integrating the data relationships with the spatial relationships to determine additional information concerning purchases by the customers;

wherein the spatial relationships further include associations of customer paths through the retail space with product placement within the retail space

[Emphasis added.]

It is respectfully submitted that the combination of Toung and Hughes, even if proper, does not teach the combination of features taught in at least Claim 39.

Though Hughes teaches tracing customer paths through the store via gps tracking, it does not teach generating such paths by means of data mining, nor relationships between those paths and product placement by means of data mining. The only mention of "mining" in Hughes are in column 17, part of a description of the Analyst tool. Hughes teaches:

> The Analyst tool offers users a variety of advanced data visualization decision making and mining tools for measuring and analyzing overall facility performance. It allows a manager to quickly see which parts, for example, in retail, which departments of a store are performing well and which are not with respect to a variety of performance measures. These measures could include total profit, profit per area, and so on. The Analyst tool also offers users a variety of advanced data visualization, decision making, and mining tools for measuring and analyzing micro-level data, for example, SKU(stock keeping unit), colors, patterns, and styles and for analyzing overall enterprise performance. It allows a centralized manager to quickly see how stores are performing within a particular region.

[Col. 17, lines 6-19.]

This passage teaches use of mining for "measuring and analyzing overall facility performance" and "measuring and analyzing micro-level data...." There is no teaching in Hughes of using data mining to "generate spatial relationships." Instead, Hughes teaches how to generate its spatial relationships using gps tracking. For example, Hughes' Abstract states:

> In a system for planning, visualizing, tracking, and analyzing physical objects such as merchandise in a retail space, a transponder is attached to each object and the transponders are interrogated periodically by a transmitter. Receivers receive the transponder signals and direct the received signals to a location processor which determines the location of each object.

Also, col. 18 lines 15-23 state:

> In another application the system provides a method of mapping a path that a customer takes as he or she shops on a store. As a customer shops in the store and picks up merchandise, a path of his or her route can be mapped and used for further analysis. The path is calculated at the point of purchase. FIG. 33 shows an example of a customer path recreation in which the items purchased by the customer are cross-referenced with the time that the items were taken off their respective fixtures.

Also, col. 20, lines 12-18 state:

> In another application the system provides a method for calculating traffic around a facility/store. For example, in retail, as customer paths are mapped this data can be used to evaluate the high and low traffic areas in the store. As described previously, customer paths are made up of a series of coordinate points that are recorded when items are in motion.

These passages teach mapping customer paths via gps (global positioning system or satellite) transponders. Though the transponder signals are used to generate spatial relationships (e.g., product location or customer path through the retail space), Hughes does not teach the use of data mining to accomplish this aim. In Hughes, data mining is only mentioned in the context of "analyzing overall facility performance," and "analyzing

micro-level data, for example, SKU, colors, patterns, and styles and for analyzing overall system performance," as described above [Col. 17, lines 5-20.]

To cure this deficiency, Examiner combines Hughes with Toung, stating:

> Toung teaches generating customer data by associating customers with information related to each customer using data mining and associating the information with spatial relationships (p. 1).

[Office Action of 03.03.03, p.3.]

However, Applicant respectfully submits that Toung does not teach "generating spatial relationships using data mining techniques, wherein the spatial relationships include relative placement of products within retail space...wherein the spatial relationships further include associations of customer paths through the retail space with products purchased," as claimed in Claim 39.

Toung teaches the following on p. 1:

> Though data mining techniques, managers are extracting information about customer buying patterns that allow them to refine merchandise placement. For example, managers discovered that shoppers were more likely to buy travel alarm clocks if they were placed in the luggage department than in the jewelry department. [Emphasis added.]

It is noted that, according to the claim language of Claim 39, "spatial relationships" of the present invention are generated "using data mining techniques." These spatial relationships, "further include associations of customer paths through the retail space with product placement...."

Though Toung teaches modifying product placement based on data mining information, it does not teach associating "customer paths through the retail space with product placement," by the use of data mining, as is claimed in the present application (e.g., Claim 39). Toung only teaches that product placement can be modified according to the results of data mining. "Customer buying patterns," quoted from Toung, refers not to physical movement patterns through the retail space, but only to the types and patterns of

purchases made by customers, as indicated by the above quoted language. There is no teaching in Toung of tracing customer movement through the retail space.

Hence, it is respectfully submitted that at least Claim 39 is distinguished from the cited references. Independent Claim 53 includes similar limitations and is believed to be allowable for the same reasons. Likewise, dependent Claims 41 and 55 include similar limitations and are believed allowable for the same reasons. Finally, by virtue of their dependence from Claims39 and 53, all remaining dependent claims are believed distinguished.

It is also respectfully submitted that the Hughes reference must be modified in order to integrate the teachings of Toung, and that such modification is not obvious.

Hughes generally deals with the problem of monitoring and maintaining an accurate representation of all inventory in a retail space. For example, Hughes states at col. 1, lines 43-49:

> An object of the present invention in one aspect is to offer users the means to monitor and maintain an accurate representation of the location of all inventory or merchandise of interest in a retail outlet....

Hughes also states its purpose to "give the user the means to employ the data to ascertain the economic/financial impact of changes in layout...." at col. 1, lines 56-57. Note that data mining is not described or applied to generating spatial relationships using data mining techniques...wherein the spatial relationships further include associations of customer paths through the retail space with product placement...." In order to apply the teaching of data mining from Toung to Hughes' system, Hughes must be modified by applying the use of data mining to generate associations between customer paths with product placement. No such teaching is found in either reference, and it is respectfully submitted that one of ordinary skill in the art would not have been motivated to make such a modification from the teachings of the cited references.

Therefore, the rejection of Claims 39, 41-44, and 53 is believed overcome.

II.   Conclusion

It is respectfully urged that the subject application is patentable over Hughes in view of Toung and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: *6.3.07*

Respectfully submitted,

Patrick C. R. Holmes
Reg. No. 46,380
Carstens, Yee & Cahoon, LLP
P.O. Box 802334
Dallas, TX 75380
(972) 367-2001
Attorney for Applicants